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Charged with developing rigorous and exacting selection procedures, the professional schools at the University of California, Berkeley, must continually evaluate their programs and students. The aim of this study was to identify on the basis of past experience those factors which have been the best predictors of a student's ability to succeed in the master's program of the Graduate School of Business Administration (the MBA). Attainment of the degree was considered the primary indicator of success, grade point average (GPA) was considered only secondarily as a means of differentiating between groups of students equally likely to earn the degree. Application and performance data of all 432 students who entered the MBA program in Falls 1961, 1962 and 1963 were collected. Because academic performance can be partially explained by a student's proficiency in English, citizenship designations were established. Age at admission appeared to be an important factor in determining the rates at which degrees were earned. Undergraduate GPA had little relationship to success in the MBA program although undergraduate academic recognition and extracurricular activities appeared relevant to later success. The Admission Test for Graduate Study in Business did not prove to be a significant tool in predicting success. Other significant variables are discussed and lists of the factors that encouraged and discouraged degree production are included. Tables illustrate the findings. (JS)

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AN ANALYSIS OF APPLICANTS ADMITTED TO THE MASTER'S PROGRAM OF THE GRADUATE SCHOOL OF BUSINESS ADMINISTRATION AT BERKELEY

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Office of Institutional Research

March, 1969

HE 000 971

PREFACE

With reference to graduate student enrollments, the Academic Plan for the Berkeley Campus 1968-1975 states that..."the departments should aim to develop rigorous and exacting selection procedures which will insure that they admit students of the highest quality and promise exclusively." Also, in the Plan's discussion of liberal and professional education a note was made that..."Berkeley's professional colleges and professional schools have undergone a significant transformation during the decade now ending. Increasingly, these units emphasize the scientific and theoretical bases of their fields, and require a broad intellectual preparation from their students."

To achieve these goals and maintain these standards, each professional college and school must continually evaluate its programs and students. The Graduate School of Business Administration at Berkeley is one of the professional curricula actively engaged in this process. The evaluation of criteria for admission to programs leading to the degree of master of business administration contained in this study represents an important aspect of the faculty's concern.

The Office of Institutional Research hopes that this study will prove useful not only to graduate schools of business administration, but to other professional programs as well.

Sidney Suslow

Director

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INTRODUCTION

This study was undertaken at the request of Associate Dean Lawrence L. Vance, who is responsible for the graduate programs at Berkeley's School of Business Administration. Its purpose is to identify on the basis of past experience those factors which have been the best predictors of a student's ability to succeed in the MBA program.

Throughout the study, primary emphasis has been placed on the earning of the degree in determining whether or not a student has been successful. Grade point averages were considered only secondarily as a means of differentiating between groups of students who were equally likely to earn the degree. Thus, a successful student is one who earned the MBA, and the most successful student is the one who maintained the highest grade point average while doing so. These

criteria do not of course, adequately measure the educational process, but additional information was not available without resorting to interviews and questionnaires. Although such techniques might well have yielded valuable data, they were beyond the scope of the present study.

Where grade point averages were used, they were grouped into three broad ranges: below 3.00, 3.00-3.49, and 3.50 or better. This is convenient, and it avoids the implication that minute differences in grade point average (GPA) are significant. The decision to place the lower bound of the highest GPA group at 3.50 was made arbitrarily, but the 3.00 lower bound of the middle group corresponds to the minimum GPA required by the Graduate Division at Berkeley. A graduate student must maintain a GPA in all course work at or above this level in order to receive a graduate degree from the University. The term "dismissed" has been applied to students against whom action was taken under this rule.

I METHODOLOGY

Application and performance data for 432 students were considered. These students represent the combined total of new entrants to the MBA program in the Fall semesters of 1961, 1962, and 1963, and they were selected by the Business School because they met two important requirements: (1) that the group contain no students who are still active in the program, and (2) that the study not include both students who attended primarily under the semester system and those who attended primarily under the quarter system. Although more recent data would be desirable, most students who have entered since Berkeley adopted the quarter system in the Fall of 1966 would not meet the first requirement, and most students who entered during 1964 and 1965 would fail to meet the second.

Since the study deals with such a limited population, it was necessary to group individual observations for most variables in order to have subpopulations of meaningful size. Even with this restriction of detail, the analysis was hampered considerably by small samples. In general, the reader should regard as tentative any conclusions based on samples of less than 40 students (roughly 10% of the population). The technique employed was one of comparing the rate of degree production and the GPA achievement of various groups of entrants with one another and with the population mean. Table 1 presents overall figures on degrees earned and GPA achievement. .

TABLE 1

Summary of Findings on MBA Performance	Number of Students	% of Total
Number of Entering Students	432	100
Number of MBA Recipients	326	75
MBA Recipients with GPA 3.50-4.00	132	40
MBA Recipients with GPA 3.00-3.49	180	55

Most variables for which data were collected are covered in the text, but some had so little relevance to the dicussion that they have been presented in Appendix 1 only. These supplementary tables take the form of frequency distributions which show separate counts for each entering class.

II CITIZENSHIP

Other studies done by this office have found that the academic performance of foreign students differs significantly from that of U.S. citizens. On the theory that this difference is largely explicable in terms of the student's proficiency in English, it was decided to subdivide foreign nationals according to their linguistic backgrounds. Accordingly, three citizenship designations were established: United States, English-speaking foreign, and other (i.e., non-English speaking) foreign. English-speaking foreign countries were identified as those in which English is the most prevalent language according to a linguistic directory in the 1966 Rand-McNally Cosmopolitan Atlas. (For a list of these countries, see Appendix B.) Imperfect as this distinction is, it appears to be meaningful when related to MBA success.

TABLE 2

CITIZENSHIP AND TERMINAL ACTION

CITIZENSHIP	TOTAL	RECEIVED MBA		DISMISSED		WITHDREW	
	NUMBER OF STUDENTS	NUMBER OF STUDENTS	%	NUMBER OF STUDENTS	%	NUMBER OF STUDENTS	%
United States	346	281	81	19	6	46	13
English Speaking Foreign	20	16	80	-	-	4	20
Non-English Speaking Foreign	66	29	44	20	30	17	26
ALL STUDENTS	432	326	75	39	9	67	16

Students from English-speaking foreign countries (see Table 2) are virtually indistinguishable in their performance from United States citizens, while students from countries where English is not the primary language did very poorly. Only 44% received the degree as opposed to 80% of the other two groups, and their rate of dismissal was five times higher than the rate for U.S. citizens.

This is not to deny that some non-English-speaking foreign citizens are successful as MBA students, but it raises the question of whether it is possible to differentiate between non-English-speaking applicants of high potential and those of low potential. Table 3 profiles various subgroups of the non-English-speaking population according to degrees earned, and one can say tentatively (pending examination of larger samples) that potentially successful applicants can be identified on the basis of their undergraduate backgrounds. Lending credence to this statement is the fact that variables which Table 3 shows to be important in predicting the success of non-English-speaking foreign students are much the same as those which succeeding chapters show to be related to MBA success for the overall population.

The reader should be aware that rows (a) through (f) in Table 3 are not mutually exclusive. Rows (g) and (h), however, eliminate doublecounting and show the dichotomy that exists within the "non-English-speaking foreign group" with respect to MBA success.

TABLE 3

MBA SUCCESS

NON-ENGLISH-SPEAKING FOREIGN STUDENTS ONLY	NUMBER OF STUDENTS	MBA RECIPIENTS	%
(a) Undergraduate Major in Mathematics, Engineering or Science	4	4	100
(b) Attended Undergraduate Institution in U.S.	5	5	100
(c) Earned Academic Honors as an Undergraduate	16	11	69
(d) Member of One or Two Extracurricular Organizations	19	11	58
(e) Member of Three or more Extracurricular Organizations	10	7	70
(f) President of One or More Extracurricular Organizations	7	6	86
(g) Students Included in One or More of Above Groups	37	24	65
(h) Students Not Included in Any of Above Groups	29	5	17
All Non-English-Speaking Foreign Students	66	29	44

III AGE AT ADMISSION

Having entered an academic program, the student is faced with three terminal actions: he will earn his degree; he will be dismissed; or he will withdraw. Tables 4 and 5 consider these three outcomes for MBA students in relation to their age at admission. Examining the rates at which degrees were earned, it seems clear that age was an important factor.

TABLE 4

STUDENT AGE AND TERMINAL ACTION

AGE AT ADMISSION	TOTAL	RECEIVED MBA		DISMISSED		WITHDREW	
	NUMBER OF STUDENTS	NUMBER OF STUDENTS	%	NUMBER OF STUDENTS	%	NUMBER OF STUDENTS	%
Under 25	235	190	81	19	8	26	11
25 to 29	150	114	76	11	7	25	17
Over 29	47	22	47	9	19	16	34
ALL STUDENTS	432	326	75	39	9	67	16

TABLE 5

MBA PERFORMANCE AND AGE AT ADMISSION

	TOTAL NUMBER OF STUDENTS	RECEIVED MBA NUMBER OF STUDENTS	%*	DISMISSED NUMBER OF STUDENTS	%*	WITHDREW NUMBER OF STUDENTS	%*
STUDENTS BY AGE AND GRADUATE GPA							
STUDENTS UNDER 25							
GPA BELOW 3.00		8	3	19	8	12	5
GPA 3.00-3.49		107	46	-	-	8	3
GPA 3.50-4.00		75	32	-	-	6	3
GROUP TOTAL	235	190	81	19	8	26	11
STUDENTS 25-29							
GPA BELOW 3.00		5	3	10	7	10	7
GPA 3.00-3.49		58	39	1	-	11	7
GPA 3.50-4.00		51	34	-	-	4	3
GROUP TOTAL	150	114	76	11	7	25	17
STUDENTS OVER 29							
GPA BELOW 3.00		1	2	9	19	11	23
GPA 3.00-3.49		15	32	-	-	1	2
GPA 3.50-4.00		6	13	-	-	4	9
GROUP TOTAL	47	22	47	9	19	16	34
ALL STUDENTS							
GPA BELOW 3.00		14	3	38	9	33	8
GPA 3.00-3.49		180	42	1	-	20	5
GPA 3.50-4.00		132	30	-	-	14	3
GRAND TOTAL	432	326	75	39	9	67	16

*Percentages calculated on total students in each age group.

The youngest (under 25 years of age) group had an 81% rate of persistence to the degree compared to only 47% for the oldest (over 29) group. Students in the over 29 age group also had a rate of dismissal more than twice as high as that of the overall population (see Table 4). Students 25-29 years old at admission were approximately at the mean in each performance area.

The specific circumstances under which a student is dismissed were discussed in the introduction. However, there is also a relationship between withdrawals and low GPA. Of the 67 withdrawals shown in Table 5, 50% had cumulative GPAs of less than 3.00 at the time they left. In other words, one half of the withdrawing students apparently withdrew in anticipation of action to be taken against them by the Graduate Division. To follow this reasoning further, Table 6 shows that when withdrawing students are considered separately, a significantly higher percent of the students over 29 years old at admission were in academic difficulty when they withdrew. The sample here is quite small, but it suggest that the "over 29" group not only has a lower probability of earning the degree, but this lower probability can be attributed to an inability to do satisfactory work.

TABLE 6

WITHDRAWING STUDENTS BY AGE AT ADMISSION

AGE AT ADMISSION	NUMBER OF STUDENTS WHO WITHDREW	GPA 3.00 AND ABOVE		GPA BELOW 3.00	
		NUMBER OF STUDENTS	%	NUMBER OF STUDENTS	%
Under 25	26	14	54	12	46
25 to 29	25	15	60	10	40
Over 29	16	5	31	11	69

Older students have more in common than the mere fact of chronological age, however. They are more likely to be married and to have children than are younger students,* and they are less likely to have gone into the MBA program immediately after having earned their undergraduate degrees. Thus it is logical to ask whether these factors are related to MBA success, and if so, whether they account to any significant extent for the poor performance of older students.

Table 7 is concerned with the marital/family status of applicants and their subsequent success in the MBA program. For the study population as a whole, neither the presence nor absence of family responsibilities seems to affect a student's propensity to earn the degree. When age is also included as a variable, married students (including those with children) show some tendency to perform better than unmarried students as age increases. About 50% of the students over 29 who were married earned the MBA, while 40% of the unmarried students in that age group did so. One is safe in concluding, therefore, that older students do not perform poorly as a result of conflict between family and academic obligations. In fact it might be argued that family responsibilities, if they have any effect, act more to spur the efforts of the mature student.

TABLE 7

MARITAL/FAMILY STATUS OF APPLICANTS

MARITAL AND FAMILY STATUS WHEN ADMITTED	TOTAL NUMBER OF STUDENTS	RECEIVED MBA NUMBER OF	%	GPA BELOW 3.00 NUMBER OF	%
Not married	279	209	75	60	22
Married	153	117	76	25	16
One or more children	54	39	72	12	22
ALL STUDENTS	432	326	75	85	20

*Of the 47 students over 29, 65% were married and 43% had children compared to 35% and 13% for the sample population.

As mentioned above, the number of years between a student's last attendance at a college or university and his entering the MBA program is also related to age. In fact, of those students who had been out of school three or fewer years, 96% were 29 or younger. Tables 8 and 9 examine degree productivity in terms of age and years out of school. The analysis is limited by small sample sizes, but it may be seen that students over 29 do materially worse than the younger students regardless of how long they have been out of school. Again, this implies that age is the important factor.

TABLE 8

AGE AND YEARS OUT OF SCHOOL AS DETERMINANTS OF MBA SUCCESS

YEARS OUT OF SCHOOL	STUDENTS 29 AND UNDER			STUDENTS OVER 29			ALL STUDENTS		
	TOTAL STUDENTS	MBA RECIPIENTS	%	TOTAL STUDENTS	MBA RECIPIENTS	%	TOTAL STUDENTS	MBA RECIPIENTS	%
Zero to 3	343	274	80	16	8	50	359	282	78
Over 3	42	30	71	31	14	45	73	44	60
All Students	385	304	79	47	22	47	342	326	75

TABLE 9

MBA PERFORMANCE AND YEARS OUT OF SCHOOL

GRADUATE GPA AND YEARS OUT OF SCHOOL	TOTAL NUMBER OF STUDENTS	RECEIVED MBA NUMBER OF STUDENTS	%*	DISMISSED NUMBER OF STUDENTS	%*	WITHDREW NUMBER OF STUDENTS	%*
STUDENTS OUT ZERO YEARS							
GPA BELOW 3.00		7	3	16	7	14	6
GPA 3.00-3.49		108	48	-		9	4
GPA 3.50-4.00		66	29	-		6	3
GROUP TOTAL	226	181	80	16	7	29	13
STUDENTS OUT 1-3 YEARS							
GPA BELOW 3.00		3	2	12	9	10	8
GPA 3.00-3.49		46	35	1	1	5	4
GPA 3.50-4.00		52	39	-		4	2
GROUP TOTAL	133	101	76	13	10	10	14
STUDENTS OUT 3 OR MORE YEARS							
GPA BELOW 3.00		4	5	10	14	9	12
GPA 3.00-3.49		26	35	-	-	6	8
GPA 3.50-4.00		14	20	-	-	4	6
GROUP TOTAL	73	44	60	10	14	19	26
ALL STUDENTS							
GPA BELOW 3.00		14	3	38	9	33	8
GPA 3.00-3.49		180	42	1	-	20	5
GPA 3.50-4.00		132	30	-	-	14	3
GRAND TOTAL	432	326	75	39	9	67	16

*Percentages calculated on total in each age group.

A final point regarding the sample population and the topic of age at admission is that there exists no unusual relationship between age and citizenship. Although the performance of students over 29 is nearly identical with that of non-English-speaking foreign citizens, they are two distinct groups. Citizenship effectively identifies one group of poor performers, and age, with some minor overlap, identifies another. Table 10 compares the performance of students over 29 by citizenship group, and it confirms that older students earn fewer degrees irrespective of their national origins.

TABLE 10

CITIZENSHIP AND AGE - STUDENTS OVER 29 ONLY

CITIZENSHIP	NUMBER OF STUDENTS	NUMBER OF MBA RECIPIENTS	%
Non-English Speaking Foreign Citizens	12	5	42
U.S. and English Speaking Foreign Citizens	35	17	49
TOTAL	47	22	47

IV UNDERGRADUATE BACKGROUND

In this chapter the following aspects of undergraduate background are considered: grade point average, major field, transfer institution, academic awards and honors, and extracurricular activities. One would ordinarily expect that these five factors, or at least the first three, would be highly relevant to the task of assessing an applicant's potential for graduate achievement. This did not, however, prove to be true in the case of MBA students.

For example, there is only a very slight and rather eccentric relationship between undergraduate Grade Point Average and MBA Grade Point Average (see Table 11 and Chart 1) and there is no relationship at all between MBA Grade Point Average and degree productivity where the MBA Grade Point Average is 3.00 or above. Thus it is not possible to translate

undergraduate GPA into MBA success by means of MBA GPA. Table 12 and 13, taken together, make this point quite clear. It is critical for the MBA student to keep his graduate GPA at or above 3.00, but his undergraduate GPA does not reflect on his ability to do this.

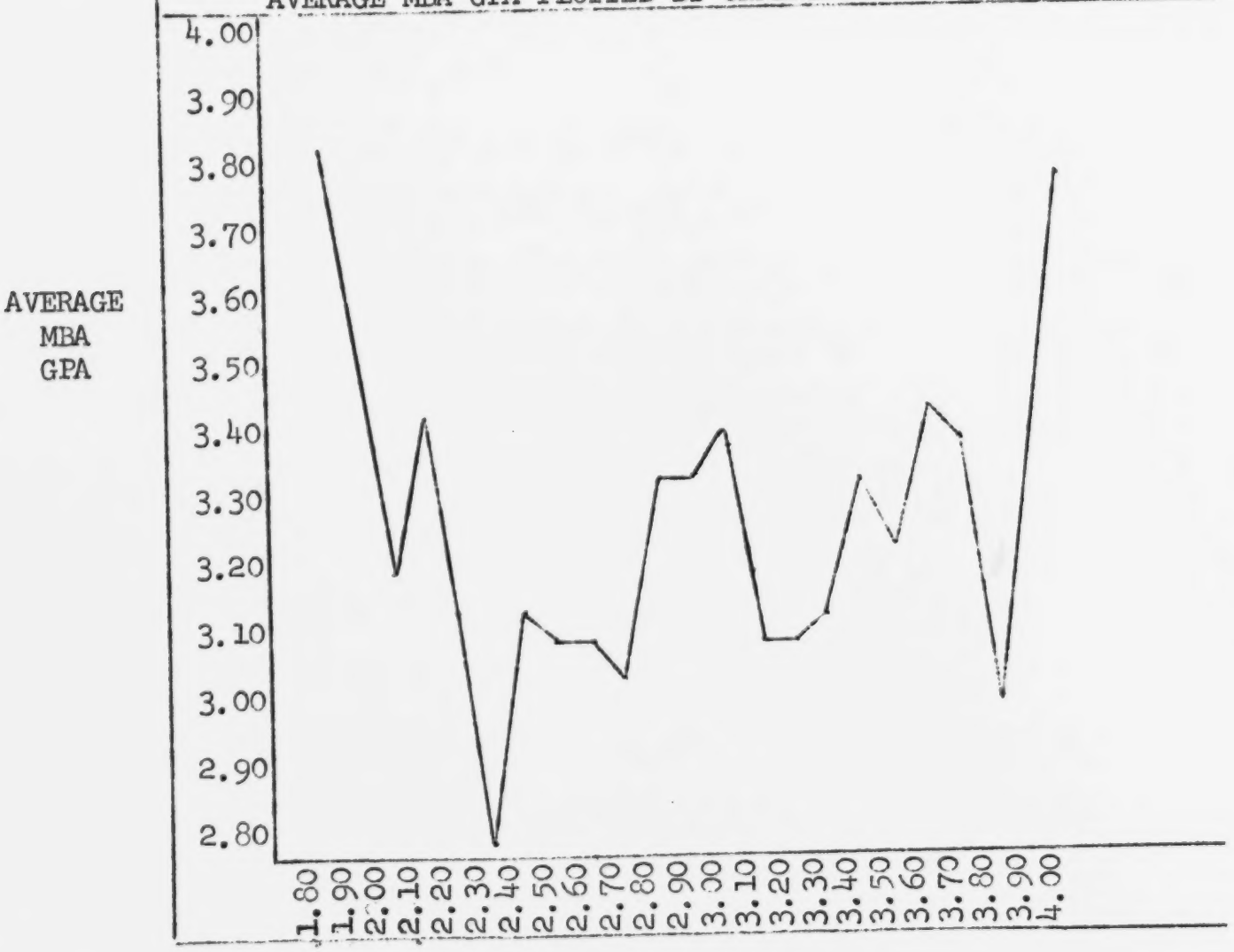
TABLE 11

GPA PERFORMANCE OF MBA STUDENTS BY UNDERGRADUATE GPA GROUP

NUMBER OF STUDENTS	UNDERGRADUATE GPA	AVERAGE MBA GPA	NUMBER OF STUDENTS	UNDERGRADUATE GPA	AVERAGE MBA GPA
1	1.81-1.90	3.85	24	2.91-3.00	3.35
0	1.91-2.00	-	40	3.01-3.10	3.40
4	2.01-2.10	3.20	27	3.11-3.20	3.10
3	2.11-2.20	3.45	27	3.21-3.30	3.10
5	2.21-2.30	3.15	23	3.31-3.40	3.15
4	2.31-2.40	2.80	15	3.41-3.50	3.35
11	2.41-2.50	3.15	19	3.51-3.60	3.25
12	2.51-2.60	3.10	11	3.61-3.70	3.45
26	2.61-2.70	3.10	9	3.71-3.80	3.40
33	2.71-2.80	3.05	7	3.81-3.90	3.00
34	2.81-2.90	3.35	4	3.91-4.00	3.80

CHART 1

AVERAGE MBA GPA PLOTTED BY UNDERGRADUATE GPA GROUP



MBA GRADE POINT AVERAGE MBA AND DEGREES EARNED

TABLE 12

GPA IN MBA PROGRAM	TOTAL NUMBER OF STUDENTS	NUMBER OF MBA RECIPIENTS	% OF TOTAL
Under 3.00	85	14*	16
3.00 to 3.49	201	180	90
ALL STUDENTS	432	326	75

*These students were granted the degree despite their substandard GPA as a result of special petitions to the Graduate Division.

UNDERGRADUATE GRADE POINT AVERAGE AND MBA GRADE POINT AVERAGE

TABLE 13

UNDERGRADUATE GPA	TOTAL NUMBER OF STUDENTS	STUDENTS WITH MBA GPA 3.00 AND UP	% OF TOTAL
No Data*	93	57	61
Under 2.50	28	23	82
2.50 to 2.99	129	108	84
3.00 to 3.49	132	117	88
3.50 and Above	50	42	84
ALL STUDENTS	432	347	81

*This group is composed primarily (90%) of students who attended foreign institutions as undergraduates. Their performance has been discussed previously under citizenship.

Even when cross-tabulated directly as in Table 14, there is no meaningful relationship between undergraduate GPA and MBA success.

UNDERGRADUATE GRADE POINT AVERAGE AND MBA DEGREES EARNED

TABLE 14

UNDERGRADUATE GPA	TOTAL NUMBER OF STUDENTS	MBA RECIPIENTS NUMBER OF STUDENTS	%	MBA RECIPIENTS OVER 3.49 GPA NUMBER OF STUDENTS	%
No Data	93	49	53	20	41
Under 2.50	28	20	71	7	35
2.50 to 2.99	129	108	84	38	35
3.00 to 3.49	132	112	85	38	34
3.50 to 4.00	50	37	74	29	78
ALL STUDENTS	432	326	75	132	40

The range of variation is not large (71% to 85%), and the degree productivity of the lowest undergraduate GPA group is essentially the same as that of the highest undergraduate GPA group. Among those who fail to earn the degree, there is a slight tendency for students with low undergraduate GPAs to be dismissed and for high-GPA students to withdraw voluntarily, but this ralationship is not strong enough to warrant much attention.

Still, undergraduate GPA should not be discounted entirely. When one looks at the GPA achievement of only those students who actually earned the degree (Table 14), one sees that 78% of the MBA graduates from the highest undergraduate GPA group earn GPAs above 3.49 in the MBA curriculum.

This compares with a population mean of 40%, and it shows that there is definite reason to favor the high-GPA applicant if other factors indicate that he has a good probability of earning the degree.

Since academic awards and honors are quite strongly related to undergraduate GPA, it seems best to discuss them here before turning to an analysis of undergraduate majors. Table 15, using the same success criteria as Table 14, groups entrants according to the type of academic recognition they received as undergraduates. In terms of degree productivity there are no significant differences among the three honor groups. The 206 students who received no undergraduate academic recognition were somewhat less successful, however, with 68% persisting to the degree. More important is the performance of these groups with respect to GPA achievement in the MBA curriculum. The positive relationship noted in the discussion of high undergraduate GPA also exists for students with a history of academic honors and awards, particularly those who were elected to Beta Gamma Sigma (the business honorary society). Students without previous academic recognition do quite poorly by this criterion. Thus information on honors and awards is a valuable supplement to undergraduate GPA data.

UUNDERGRADUATE ACADEMIC RECOGNITION AND MBA SUCCESS

TABLE 15

TYPE OF UNDERGRADUATE ACADEMIC RECOGNITION	TOTAL NUMBER OF STUDENTS	MBA RECIPIENTS NUMBER OF STUDENTS	%	MBA RECIPIENTS OVER 3.49 GPA NUMBER OF STUDENTS	%
Received One or More Scholarships or Awards	130	105	81	63	60
On Dean's List/Degree	167	141	84	69	49
Member of Business Honor Society	25	21	84	15	71
Students Who Received No Recognition	206	140	68	37	26
ALL STUDENTS	432	326	75	132	40

UNDERGRADUATE MAJOR AND MBA SUCCESS

TABLE 16

UNDERGRADUATE MAJOR FIELD	TOTAL NUMBER OF STUDENTS	MBA RECIPIENTS NUMBER OF STUDENTS	%	MBA RECIPIENTS OVER 3.49 GPA NUMBER OF STUDENTS	%
Engineering and Science	78	63	81	31	49
Business Administration	209	167	80	66	40
Economics	86	52	60	19	37
Other Social Sciences	34	27	79	8	30
Miscellaneous	25	17	68	8	27
ALL STUDENTS	432	326	75	132	40

The undergraduate major of the MBA candidate is another aspect of undergraduate background which is not importantly related to MBA success. Table 16 shows degree productivity and GPA achievement for five undergraduate major groups, (see Appendix 3 for composition of groups).

On the whole, there is little variation among the groups in either category of achievement, although the relatively low degree productivity of economics majors does require comment. This is accounted for by the exceptionally poor performance of economics majors from foreign institutions. This group represents roughly 35% of the economics majors and shows only a 31% rate of degree productivity. The performance of economics majors from U.S. institutions, presented separately in Table 17, is on a par with that of the other major groups shown in Table 16. It can be said, therefore, that undergraduate preparation in economics is not in and of itself disadvantageous to the MBA candidate.

MBA PERFORMANCE OF UNDERGRADUATE ECONOMICS MAJORS

TABLE 17

PERFORMANCE OF ECONOMICS MAJORS	TOTAL NUMBER OF STUDENTS	MBA RECIPIENTS		MBA RECIPIENTS OVER 3.49 GPA	
		NUMBER OF STUDENTS	%	NUMBER OF STUDENTS	%
Attended Undergraduate Institutions in the U.S.	57	43	75	16	37
Attended Foreign Undergraduate Institutions	29	9	31	3	33
ALL ECONOMICS MAJORS	86	52	60	19	37

Two aspects of undergraduate background remain to be covered: transfer institution and extracurricular activities. The first of these is quite similar to undergraduate GPA and undergraduate major in that it is not an important predictor of MBA success. In order to facilitate investigation of this point, U.S. institutions were grouped according to a system developed by the Graduate School of Business Administration. The categories of institutions which appear in Table 18 derive from this system, and they are explained in Appendix 4.

UNDERGRADUATE INSTITUTION AND MBA SUCCESS

TABLE 18

UNDERGRADUATE INSTITUTION	TOTAL NUMBER OF STUDENTS	MBA RECIPIENTS		MBA RECIPIENTS OVER 3.49	
		NUMBER OF STUDENTS	%	NUMBER OF STUDENTS	%
Berkeley	69	59	86	32	54
Other U.C.	29	19	73	9	47
A.A.U.	67	57	85	17	30
Accredited	187	151	81	59	39
Foreign	83	40	48	15	38
ALL INSTITUTIONS	432	326	75	132	40

Again the most striking feature of the analysis is the consistency of performance among the groups. The principal exception is the group of students from foreign institutions. A closer look at this group, however, shows that it is 75% composed of non-English-speaking foreign citizens whose low degee productivity has been discussed above. Citizenship (i. e. lack of familiarity with the English language) seems to be more important

here than the candidate's undergraduate institution, and the experience of English-speaking foreign students supports this conclusion. Their rate of degree production equalled that of U.S. citizens (see Table 2), yet 80% attended foreign institutions. Students from U.C. campuses other than Berkeley also appear to earn fewer degrees than do students from U.S. institutions as a whole, but the sample is not large enough to warrant a final judgment.

Data on extracurricular activities are difficult to analyze because of the non-standard way in which students mark this information on their applications and because of the great range of activities which are available on most undergraduate campuses. Nevertheless, the rough measures employed in this study yield interesting results in that there is some relationship between extracurricular activities and MBA success. At least the samples are large enough and the differences in performance sufficiently pronounced to make this conclusion seem reasonable.

A student who reports no memberships (see Table 19) is 18% less likely to earn the degree than the student who claims at least one, and he is 23% less likely to do so than the student who was president of one or more organizations. On the other hand, there is no direct relationship between number of memberships and MBA success, nor do extracurricular activities point to high GPA among MBA graduates. Apparently what is being measured here are factors such as initiative, breadth of interest, and the ability to apply practical knowledge. This being the case, it seems quite logical that there would be a positive relationship with success in graduate school.

UNDERGRADUATE EXTRACURRICULAR ACTIVITIES AND MBA SUCCESS

TABLE 19

EXTRA CURRICULAR ACTIVITIES	TOTAL NUMBER OF STUDENTS	MBA RECIPIENTS NUMBER OF STUDENTS	%	MBA RECIPIENTS OVER 3.49 GPA NUMBER OF STUDENTS	%
No Membership	148	94	64	36	38
One or Two Memberships	152	125	82	56	45
Three or More Memberships	132	107	81	40	37
Held No Offices	278	200	72	90	45
President of One or More Organizations	84	73	87	29	40
Held Other Offices	70	53	76	13	25
Played One or More Varsity Sport	59	47	80	25	53
Not Involved in Varsity Sport	373	279	75	107	38

V THE ADMISSION TEST FOR GRADUATE STUDY IN BUSINESS

While it may be true generally that the Admission Test for Graduate Study in Business (ATGSB) provides an important new tool for assessing the relative abilities of students who wish to enter MBA programs, Berkeley's experience does not confirm this fact. Because the ATGSB was not required for admission to Berkeley's MBA program during the period covered by this study, data exist only for the one-third of the entrants who took the test voluntarily in hopes of increasing their chances for admission. Thus, the group for whom we have ATGSB scores includes students who felt they had something to gain (or at least nothing to lose) by taking the test and excludes foreign students, most of whom had no ready access to a

test center. As one might expect, this process of self-selection produced a group of students whose MBA success rate (82%) is somewhat higher than the population mean. To eliminate the effect of this development on our discussion of the value of ATGSB scores as a selection factor, this chapter will restrict the population under consideration to the 139 students who actually submitted ATGSB results. The reader should keep in mind that he must now think in terms of a mean success rate of 82%.

Three areas in which test scores might prove useful were considered. On the basis of the data available, however, only the quantitative test seems to measure anything of value. The three areas investigated are outlined below, and Table 20, which compares test scores with MBA success, appears at the end of the chapter.

1. Are any of the tests in the ATGSB battery effective in predicting whether or not the student will earn an MBA?

   No. On the quantitative and verbal tests, lower scores put the student at roughly the mean in degree productivity, while higher scores put him below the mean. So-called Total Scores are inversley related to degree productivity.

2. Since an MBA grade point average below 3.00 virtually precludes a student from earning the MBA (see Table 11), are any of the ATGSB tests effective in identifying students whose GPA is likely to fall in this range?

No. There seems to be no relationship between the test scores a student earns and his propensity to have a substandard GPA.

3. If degree winners only are considered, are any of the ATGSB scores related to the student's MBA grade point average? Yes. There is a definite relationship between all three test scores and the student's ability to earn an MBA GPA of 3.50 or above. This is especially true in the lowest range, but it becomes less important as scores improve.

Because the population is both small and atypical, it is not worthwhile to dwell further on the topic of ATGSB scores. Berkeley has begun to require these tests of all MBA applicants, and the information necessary to explore this subject thoroughly will soon be available. Pending further research, test results should be used with caution. They appear to say nothing about a student's ability to earn the degree, and only seem useful in choosing between two students whose ability to earn the degree has been determined, by other means, to be equal.

ATGSB SCORED AND MBA SUCCESS

TABLE 20

ATGSB SCORES	TOTAL NUMBER OF STUDENTS	STUDENTS UNDER 3.00 GPA NUMBER OF STUDENTS	% OF TOTAL	MBA RECIPIENTS NUMBER OF STUDENTS	% OF TOTAL	MBA RECIPIENTS OVER 3.49 GPA NUMBER OF STUDENTS	% OF TOTAL
QUANTITATIVE							
Under 30	46	5	11	38	3	10	26
30 to 34	40	3	8	34	85	12	35
35 and UP	53	5	9	42	79	18	43
TOTAL	139	13	9	114	82	40	35
VERBAL							
Under 30	59	6	10	49	83	11	22
30 to 34	43	3	7	36	84	18	50
35 and Up	37	4	11	29	78	11	38
TOTAL	139	13	9	114	82	40	35
TOTAL SCORE							
0-499	43	4	9	37	86	9	24
500-549	35	4	11	29	83	12	41
550-Up	61	5	8	48	79	19	40
TOTAL	139	13	9	114	82	40	35

VI OTHER SIGNIFICANT VARIABLES

This chapter touches briefly upon several aspects of the student's background which are pertinent to this study, but which do not merit chapter length treatment individually. In Chapter III the problem of student age as it relates to MBA success was considered, but no attempt was made to present data on what the applicants did, aside from their experience as undergraduates, prior to entering the MBA program. This information was gathered, however, and is presented in Table 21. The only criterion of success which has been applied is whether or not the student earned the MBA. (Military experience and employment were evaluated as shown in Appendices 5 and 6.)

NON-ACADEMIC FACTORS AND MBA SUCCESS

TABLE 21

ACTIVITY BETWEEN UNDERGRADUATE AND MBA STUDY	NUMBER OF STUDENTS	MBA RECIPIENTS NUMBER OF STUDENTS	%
Served in Military	129	102	79
Worked Full-Time	202	142	70
Had Summer or Part-Time Employment Only	208	168	81
No Employment History	22	15	68
Attended Other Graduate Institution	30	12	40

The most interesting item in Table 21 concerns students who attend a graduate institution other than the Graduate School of Business Administration at Berkeley. It is unfortunate that the sample is small because this group's success rate is quite significantly lower than the population mean. There is reason to examine the other potentialities of such an applicant very carefully before granting admission. If he has no clear strengths he would seem to be a poor risk. The other groups are all clustered fairly closely around the mean. The "No Employment" group is, and is always likely to be, too small to be of much concern. The "Military Service" and "Summer and Part-Time Employment" group tend to be younger than the "Full-time Employment" group, and show a higher success rate accordingly.

Another factor of interest is the length of time that students spend in the program. For degree winners, this is primarily determined by the number of 100G courses* they must take. Students who withdraw, on the other hand, tend to leave almost right away. Table 22 summarizes length of time data. The average time taken to earn the degree was 3.5 semesters, and over 85% of those who earned the degree did so in two to four semesters. Thus, there is no problem of students lingering for extensive periods before earning the degree, nor do unsuccessful students tie up valuable facilities and resourses over long periods only to drop out or to be dismissed in the end.

*100G courses are the graduate equivalents of certain division undergraduate courses which are prerequisite to virtually the entire MBA curriculum. A student who did not major in business administration as an undergraduate would normally spend between one and two semesters compensating for this by means of 100G courses.

TABLE 22

LENGTH OF TIME IN THE MBA PROGRAM

SEMESTERS COMPLETED	RECEIVED MBA			DISMISSED			WITHDREW		
	NUMBER OF STUDENTS	%	CUMULATIVE %	NUMBER OF STUDENTS	%	CUMULATIVE %	NUMBER OF STUDENTS	%	CUMULATIVE %
0-1	4	1	1	13	33	33	41	61	61
2	60	18	19	17	44	77	18	27	88
3	103	32	51	4	10	87	3	4	92
4	117	36	87	4	10	97	4	6	98
5	29	9	96	1	1	100	1	1	100
6 AND ABOVE	13	4	100	-	-	-	-		
TOTAL	326	100	-	39	100	-	67	100	-
AVERAGE	3.5 SEMESTERS			2.1 SEMESTERS			1.6 SEMESTERS		

A final admissions problem is that of the returning student. As a group, the 41 students who withdrew and returned had a success rate (degrees earned) of 50%. Unfortunately, there is no way of knowing what their MBA grade point averages were at the time they originally withdrew. It is likely that they were readmitted only if they left in good standing (GPA 3.00 or above), but in that case their success rate is low compared to the population mean. In addition, 17% of the returning students were subsequently dismissed compared to a population mean of 9%. Thus it would appear that there is no reason to favor an applicant who is applying for readmission over a new applicant even if the former left voluntarily. Since students who withdrew did not differ significantly from the general population in age, citizenship, and undergraduate background, it is likely that their having once failed to finish the program was an indication of their likelihood to fail again.

VII CONCLUSION

The general sense of the foregoing analysis has been to cast serious doubt on the validity of basing MBA admissions decisions on the standard criteria of undergraduate GPA, undergraduate major, and ATGSB scores. Where the goal is to increase degree productivity, these factors seem to be irrelevant. On the other hand, it cannot be said that all applicants have an equal chance of earning the degree. Chapters II and III suggest that careful screening on citizenship and age alone would make possible a 10% increase in the mean rate of degree production. There are also other factors of some importance, but like citizenship and age, they are not really suitable for publication in a list of minimum admissions requirements.

Figure 1 lists the factors which were important with respect to

degree production, and Figure 2 lists factors that were related to high GPA among degree recipients. It would be perfectly possible, of course to base an admissions policy on these factors, but this should not be done without further investigation to be certain that they are valid for larger and more current populations than were dealt with here. In addition the MBA curriculum has undergone considerable change with the advent of the quarter system, and the effect of this on the above findings needs to be considered.

FIGURE 1

A student has a high probability of earning the MBA if he:	A student is not likely to earn the MBA if he:
was president of one or more extracurricular organizations	is a citizen of a non-English-speaking foreign country
received an academic honor or award as an undergraduate	was over 29 when admitted
was a member of the business honor society	attended another graduate institution before applying to Berkeley
	withdrew from the MBA program previously
	reports no memberships in extracurricular organizations.

FIGURE 2

An MBA recipient is likely to graduate with a GPA of 3.50 or higher if:	An MBA recipient is unlikely to graduate with a GPA of 3.50 or higher if:
his undergraduate GPA was 3.50 or above	his ATGSB scores were in the lowest performance range (Table 20).
he was a member of the business honor society	
received one or more scholarships and awards as an undergraduate.	

APPENDIX 1

FREQUENCY DISTRIBUTIONS

OF DATA COLLECTED BUT

NOT GIVEN DETAILED

TREATMENT IN TEXT

SEX OF STUDENT

YEAR OF ENTRY

SEX	1961	1962	1963	TOTAL
MALE	141	121	149	411
FEMALE	7	5	9	21
TOTAL	148	126	158	432

UNDERGRADUATE MAJOR

MAJOR	YEAR OF ENTRY 1961	1962	1963	TOTAL
Mathematics and Statistics	4	1	1	6
Engineering	21	20	14	55
Physical Sciences	3	6	8	17
Business Administration	70	62	77	209
Other Professional	-	2	-	2
Economics	24	25	37	86
Other Social Sciences	12	8	14	34
Life Sciences or Agriculture	4	-	-	4
Arts, Humanities, Languages	10	2	7	19
TOTAL	148	126	158	432

AGE AT ADMISSION

YEAR OF ENTRY

AGE	1961	1962	1963	TOTAL
19	-	1	-	1
20	2	2	1	3
21	5	6	12	23
22	28	31	44	103
23	22	11	26	59
24	16	13	17	46
25	18	11	13	42
26	14	8	15	37
27	12	13	7	32
28	7	9	7	23
29	5	6	5	16
30	5	1	2	8
31	4	2	3	9
32	1	-	2	3
34	-	3	2	5
35	2	1	-	3
36	1	2	1	4
38	1	-	-	1
39	1	-	1	2
40	1	1	-	2
41	1	-	-	1
42	2	1	-	3
43	-	2	-	2
48	1	2	-	3
56	1	-	-	1
TOTAL	148	126	158	432

GRADUATE DEGREE HELD AT ADMISSION

YEAR OF ENTRY

DEGREE	1961	1962	1963	TOTAL
None	140	118	152	410
Master's	7	6	5	18
L. L. B.	1	2	1	4
TOTAL	148	126	158	432

MARITAL STATUS AT ADMISSION

YEAR OF ENTRY

MARITAL STATUS	1961	1962	1963	TOTAL
Not Married	87	83	109	279
Married	61	43	49	153
TOTAL	148	126	158	432

NUMBER OF CHILDREN AT ADMISSION

YEAR OF ENTRY

NUMBER OF CHILDREN	1961	1962	1963	TOTAL
None	130	106	142	378
1	9	7	11	27
2	7	6	4	17
3	2	5	1	8
4	-	1	-	1
5	-	1	-	1
TOTAL	148	126	158	432

OTHER GRADUATE INSTITUTION

YEAR OF ENTRY

INSTITUTION	1961	1962	1963	TOTAL
None	140	113	149	402
Berkeley	1	6	1	8
Other U.C.	-	-	-	0
A. A. U.	-	4	5	9
Accredited	3	1	3	7
Foreign	4	2	-	6
TOTAL	148	126	158	432

OTHER GRADUATE MAJOR

YEAR OF ENTRY

MAJOR	1961	1962	1963	TOTAL
None	140	113	149	402
Mathematics and Statistics	-	-	-	0
Engineering	-	1	2	3
Physical Scineces	2	1	1	4
Business Administration	2	3	3	8
Other Professional	1	4	3	8
Economics	2	3	-	5
Other Social Science	-	1	-	1
Life Science and Agriculture	-	-	-	0
Arts, Humanities, Languages	1	-	-	1
TOTAL	148	126	158	432

NUMBER OF IDENTIFIABLY DIFFERENT SCHOLARSHIPS AND MONITARY AWARDS RECEIVED

YEAR OF ENTRY

NUMBER OF AWARDS	1961	1962	1963	TOTAL
None	105	87	110	302
1	29	25	35	89
2	9	9	9	27
3	3	2	1	6
4	2	2	1	5
5	-	1	2	3
TOTAL	148	126	158	432

UNDERGRADUATE ACADEMIC HONORS

HONOR RECEIVED	1961	1962	1963	TOTAL
None	93	74	98	265
Dean's List, Honor Group, etc.	51	45	57	153
Graduation Cum Laude	-	3	-	3
Phi Beta Kappa	3	2	2	7
Graduation Summa or Magna Cum Laude	1	2	1	4
TOTAL	148	126	158	432

MEMBERSHIP IN BUSINESS HONORARY SOCIETY
(BETA GAMMA SIGMA)

YEAR OF ENTRY

MEMBERSHIP	1961	1962	1963	TOTAL
Non-Member	142	123	142	407
Member	6	3	16	25
TOTAL	148	126	158	432

TYPE OF PREVIOUS EMPLOYMENT EXPERIENCE

YEAR OF ENTRY

EXPERIENCE	1961	1962	1963	TOTAL
None	14	3	5	22
Summer, Part-Time or Temporary only	38	69	101	208
Marketing and Professional Sales	6	6	5	17
Fiscal and Quantitative Services	15	9	14	38
Education	6	5	4	15
Engineering and Science	15	14	6	35
Administrative or Managerial	8	12	15	35
Other Professions	-	4	2	6
Clerical, Technical, etc.	46	4	6	56
TOTAL	148	126	158	432

TOTAL NUMBER OF YEARS EMPLOYED

NUMBER OF YEARS	YEAR OF ENTRY 1961	1962	1963	TOTAL
None	14	3	6	23
1	35	19	62	116
2	32	34	42	108
3	24	23	21	68
4	13	12	9	34
5	8	8	8	24
6	6	7	5	18
7	5	4	-	9
8	2	2	2	6
9 or More	9	14	3	26
TOTAL	148	126	158	432

NUMBER OF IDENTIFIABLY DIFFERENT MEMBERSHIPS IN CLUBS AND ORGANIZATIONS

NUMBER OF MEMBERSHIPS	YEAR OF ENTRY 1961	1962	1963	TOTAL
None	51	60	37	148
1	15	19	29	63
2	23	21	45	89
3	20	16	18	54
4	17	4	12	33
5	10	4	5	19
6	6	1	4	11
7	3	-	4	7
8	-	-	1	1
9 or More	3	1	3	7
TOTAL	148	126	158	432

OFFICES HELD IN CLUBS AND ORGANIZATIONS

OFFICES	YEAR OF ENTRY 1961	1962	1963	TOTAL
None	82	97	99	278
President of One or More	35	9	40	84
Vice President of One or More	3	5	4	12
Held Other Office	28	15	15	58
TOTAL	148	126	158	432

TOTAL NUMBER OF YEARS OF MILITARY DUTY

NUMBER OF YEARS	YEAR OF ENTRY			
	1961	1962	1963	TOTAL
None	101	81	121	303
1	6	15	2	23
2	15	11	22	48
3	11	10	7	28
4	7	5	5	17
5	3	-	-	3
6	1	-	-	1
7	1	-	1	2
8	1	-	-	1
9 Or More	2	4	-	6
TOTAL	148	126	158	432

MILITARY RANK AT SEPARATION FROM SERVICE

RANK	YEAR OF ENTRY			
	1961	1962	1963	TOTAL
No Military Experience	101	81	121	303
Lower Enlisted Ranks	11	15	11	37
Upper Enlisted Ranks	4	3	-	7
Junior Officers	28	22	26	76
Senior Officers	4	5	-	9
TOTAL	148	126	158	432

PARTICIPATION IN VARSITY ATHLETICS

SPORTS	YEAR OF ENTRY			
	1961	1962	1963	TOTAL
None	115	118	140	373
Football, Basketball Baseball	9	3	10	22
Other Sports	24	5	8	37
TOTAL	148	126	158	432

TYPE ACCEPTANCE GRANTED BY UCB

TYPE OF ACCEPTANCE	YEAR OF ENTRY			
	1961	1962	1963	TOTAL
Regular	138	109	146	393
Conditional	10	17	12	39
TOTAL	148	126	158	432

FIELD OF SPECIALIZATION IN MBA PROGRAM

YEAR OF ENTRY

	1961	1962	1963	TOTAL
General Curriculum	8	10	6	24
Administration and Policy	27	33	24	84
Accounting	18	12	23	53
Industrial Relations	16	8	7	31
Finance	23	19	37	79
Marketing	32	14	28	74
Production Management	8	8	9	25
Real Estate	3	6	4	13
Transportation	3	1	2	6
Quantitative Methods	1	-	2	3
Operations Research	6	2	5	13
International Business	2	12	11	25
Accounting/Finance	-	1	-	1
Marketing/Finance	1	-	-	1
TOTAL	148	126	158	432

PRESENT STATUS OF STUDENT

YEAR OF ENTRY

STATUS	1961	1962	1963	TOTAL
Received MBA	101	92	133	326
Withdrew-Lacks Comprehensive Exam	-	1		1
Dismissed-Low GPA	13	18	8	39
Withdrew-Other Reasons	34	15	17	66
TOTAL	148	126	158	432

WITHDRAWALS AND RETURNS

YEAR OF ENTRY

PATTERN OF ATTENDENCE	1961	1962	1963	TOTAL
Continuous	145	107	139	391
Withdrew and Returned	3	16	18	37
Multiple Withdrawals and Returns	-	3	1	4
TOTAL	148	126	158	432

NUMBER OF UNIVERSITY OF CALIFORNIA APPOINTMENTS* HELD WHILE ENROLLED IN MBA PROGRAM

YEAR OF ENTRY

UNIVERSITY APPOINTMENTS	1961	1962	1963	TOTAL
None	136	112	144	392
One	12	13	14	39
Two	-	1	-	1
TOTAL	148	126	158	432

*Includes teaching and research assistantships, readerships and teaching fellowships.

OUTSIDE EMPLOYMENT WHILE ENROLLED
IN MBA PROGRAM

YEAR OF ENTRY

	1961	1962	1963	TOTAL
Unknown	2	3	4	9
None	126	106	136	368
Up to Twenty Hours/Week	16	10	17	43
Over Twenty Hours/Week	4	7	1	12
TOTAL	148	126	158	432

APPENDIX 2

CLASSIFICATION OF CITIZENSHIP

ENGLISH-SPEAKING FOREIGN COUNTRIES*
ANTIGUA
AUSTRALIA
BAHAMAS
BERMUDA
BRITISH HONDURAS
CANADA
ENGLAND (INCLUDING NORTHERN IRELAND AND OTHER UNITED KINGDOM)
GUYANA
IRELAND
JAMAICA
MALTA
NEW ZEALAND
SCOTLAND (UNITED KINGDOM)
SOUTH AFRICA, UNION OF
WALES (UNITED KINGDOM)

* TAKEN FROM RAND MCNALLY, COSMOPOLITAN ATLAS 1966. ENGLISH SHOWN AS PRIMARY (MOST PREVALENT) LANGUAGE.

APPENDIX 3

CLASSIFICATION OF MAJOR FIELDS

MATHEMATICS OR STATISTICS

MATHEMATICS
STATISTICS
QUANTITATIVE METHODS
APPLIED MATHEMATICS
LOGIC AND METHODOLOGY

ENGINEERING

CIVIL ENGINEERING
ELECTRICAL ENGINEERING
MECHANICAL ENGINEERING
ENGINEERING SCIENCE
MINING
CERAMIC ENGINEERING
INDUSTRIAL ENGINEERING
PROCESS ENGINEERING
NAVAL ARCHITECTURE
PETROLEUM ENGINEERING
AGRICULTURAL ENGINEERING
IRRIGATION ENGINEERING
METALLURGY SCIENCE
SANITARY ENGINEERING
TRANSPORTATION ENGINEERING
NUCLEAR ENGINEERING
COMPUTER SCIENCE

PHYSICAL SCIENCES

CHEMISTRY
PHYSICS
GEOLOGY
ASTRONOMY
GEOPHYSICS

BUSINESS ADMINISTRATION

BUSINESS ADMINISTRATION
MARKETING
FINANCE
REAL ESTATE
PRODUCTION MANAGEMENT
ACCOUNTING
INDUSTRIAL RELATIONS
GENERAL BUSINESS
HOSPITAL ADMINISTRATION
COMMERCE

OTHER PROFESSIONAL

ARCHITECTURE
DESIGN
DECORATIVE ART
LIBRARY SCIENCE
LANDSCAPE ARCHITECTURE
CITY PLANNING
EDUCATION
OPTOMETRY

APPENDIX 3

PUBLIC HEALTH
MEDICINE OR PRE-MED
DENTISTRY
PHARMACY
PHYSIOLOGICAL OPTICS
PHYSICAL EDUCATION
JOURNALISM
PUBLIC ADMINISTRATION
SOCIAL WELFARE
PRE-LAW OR LAW
NURSING
CRIMINOLOGY
BIOSTATISTICS
ENVIRONMENTAL HEALTH SCIENCE
BROADCASTING
VETERINARY MEDICINE

ECONOMICS

ECONOMICS
AGRICULTURAL ECONOMICS

OTHER SOCIAL SCIENCES

ANTHROPOLOGY
GEOGRAPHY
SOCIOLOGY
SOCIAL STUDIES
AMERICAN CIVILIZATION
SLAVIC STUDIES
ASIAN STUDIES
HISTORY
POLITICAL SCIENCE
INTERNATIONAL RELATIONS
AMERICAN STUDIES
PSYCHOLOGY
LATIN AMERICAN STUDIES
GOVERNMENT

LIFE SCIENCE AND AGRICULTURE

LIFE SCIENCE
BACTERIOLOGY
BIOCHEMISTRY
PHYSIOLOGY
ZOOLOGY
MICROBIOLOGY
BIOPHYSICS
ENDOCRINOLOGY
ENTOMOLOGY
GENETICS
PLANT PATHOLOGY
SOIL SCIENCE
ANIMAL HUSBANDRY
PLANT PHYSIOLOGY
POULTRY SCIENCE
AGRONOMY
RANGE MANAGEMENT
BIOLOGY
BOTANY
PATHOLOGY
PALEONTOLOGY
BIORADIOLOGY
COMPARATIVE BIOCHEMISTRY
MEDICAL PHYSICS
AGRICULTURE
FORESTRY
HORTICULTURE
POMOLOGY
AGRICULTURAL CHEMISTRY
NUTRITION
FOOD SCIENCE
PARASITOLOGY
HOME ECONOMICS
WOOD TECHNOLOGY

APPENDIX 3

ARTS, HUMANITIES, AND LANGUAGES

ART
DRAMATIC
ENGLISH
GERMAN
SCANDINAVIAN
SPEECH
ARCHEOLOGY
PHILOLOGY
COMPARATIVE RELIGION
MUSIC
ROMANCE LITERATURE
FRENCH
NEAR EASTERN LANGUAGES
HISTORY OF ART
CLASSICS
LINGUISTICS
PHILOSOPHY

APPENDIX 4

CLASSIFICATION OF UNDERGRADUATE INSTITUTIONS

Students who earned their undergraduate degrees within the UC system were divided into two groups: those who attended Berkeley and those who attended a UC campus other than Berkeley. For students who entered Berkeley's MBA program from outside the UC system, classification criteria derive from the Report of Credit Given by Educational Institutions (1961 Edition) as prepared by T.E. Kellogg for the American Association of Collegiate Registrars and Admissions Officers. The catagories were defined as follows:

AAU	-	institution is accredited and a member of the Association
Accredited	-	institution is accredited but not a member of the Association
Other	-	a U.S. institution not in either of the above catagories*
Foreign	-	any institution not located in the U.S. or its territories and possessions.

*Although students from non-accredited institutions have been admitted to Berkeley, none were present in the sample group

APPENDIX 5

CLASSIFICATION OF MILITARY RANK - INTERSERVICE EQUIVALENTS

	AIR FORCE	ARMY	MARINES	NAVY (AND COAST GUARD)
LOWER ENLISTED RANKS				
	BASIC AIRMAN	PRIVATE	PRIVATE	SEAMAN RECRUIT
	AIRMAN THIRD	PRIVATE FIRST	PRIVATE FIRST	SEAMAN APPRENTICE
	AIRMAN SECOND	CORPORAL	LANCE CORPORAL	SEAMAN
	AIRMAN FIRST	SERGEANT	CORPORAL	PETTY OFFICER THIRD
	STAFF SERGEANT	SPECIALIST IV	SERGEANT	PETTY OFFICER SECOND
		SPECIALIST V		
UPPER ENLISTED RANKS				
	TECHNICAL SERGEANT	STAFF SERGEANT	STAFF SERGEANT	PETTY OFFICER FIRST
	MASTER SERGEANT	SERGEANT FIRST CLASS	GENNERY SERGEANT	CHIEF PETTY OFFICER
	SENIOR MASTER SERGEANT	PLATOON SERGEANT	FIRST SERGEANT	SENIOR CHIEF PETTY OFFICER
	CHIEF MASTER SERGEANT	MASTER SERGEANT	MASTER SERGEANT	MASTER CHEIF PETTY OFFICER
		FIRST SERGEANT	MASTER GUNNERY SERGEANT	
		SERGEANT MAJOR	SERGEANT MAJOR	
JUNIOR OFFICERS				
	WARRANT OFFICER	WARRANT OFFICER	WARRANT OFFICER	WARRANT OFFICER
	CHIEF WARRANT	CHIEF WARRANT	CHIEF WARRANT	COMMISSIONED WARRANT
	SECOND LIEUTENANT	SECOND LIEUTENANT	SECOND LIEUTENANT	ENSIGN
	FIRST LIEUTENANT	FIRST LIEUTENANT	FIRST LIEUTENANT	LIEUTENANT JUNIOR GRADE
	CAPTAIN	CAPTAIN	CAPTAIN	LIEUTENANT
SENIOR OFFICERS				
	MAJOR	MAJOR	MAJOR	LIEUTENANT COMMANDER
	LIEUTENANT COLONEL	LIEUTENANT COLONEL	LIUETENANT COLONEL	COMMANDER
	COLONEL	COLONEL	COLONEL	CAPTAIN
	BRIGADIER GENERAL	BRIGADIER GENERAL	BRIGADIER GENERAL	READ ADMIRAL
	MAJOR GENERAL	MAJOR GENERAL	MAJOR GENERAL	VICE ADMIRAL
	LIEUTENANT GENERAL	LIEUTENANT GENERAL	LIEUTENANT GENERAL	ADMIRAL
	GENNERAL	GENERAL	GENERAL	

APPENDIX 6

CLASSIFICATION OF EMPLOYMENT

GENERAL COMMENT IN REGARD TO SELF-EMPLOYED PERSONS: IF THEY DID NOT LOGICALLY FALL INTO ANY OF THE GROUPS SET FORTH BELOW, THEY WERE CLASSIFIED UNDER ADMINISTRATIVE AND MANAGERIAL.

CATEGORY	TYPICAL JOB TITLES
SUMMER, PART-TIME, ETC.	SELF-EXPIANATORY
MARKETING AND PROFESSIONAL SALES	MANUFACTURER"S REPRESENTATIVE SALES REPRESENTATIVE FIELD REPRESENTATIVE CORPORATE SALES REPRESENTATIVE WHOLESALE AGENT INSURANCE SALESMAN REAL ESTATE SALESMAN SALES TRAINEE (MARKETING TRAINEE) AGENCY REPRESENTATIVE ADVERTISING MAN
FISCAL AND QUANTITATIVE SERVICES	ACCOUNTANT AUDITOR JUNIOR ACCOUNTANT ACTUARY (TRAINEE) CLAIMS REPRESENTATIVE PROGRAMMER SYSTEMS ANALYST BUDGET ANALYST MANAGEMENT INFORMATION SPECIALIST STATISTICIAN CERTIFIED PUBLIC ACCOUNTANT
EDUCATION	TEACHER DEAN INSTRUCTOR PROFESSOR, ETC. PRINCIPAL SCHOOL ADMINISTRATOR LIBRARIAN
ENGINEERING AND SCIENCE	ENGINEER-CIVIL, MECHANICAL, TRAFFIC, EI PHYSICIST BIOLOGIST GEOLOGIST TECHNICAL WRITER RESEARCH CHEMIST

APPENDIX 6

CATEGORY	TYPICAL JOB TITIES
ADMINISTRATIVE AND MANAGERIAL	FACTORY OFFICE MANAGER PERSONNEL REPRESENTATIVE INDUSTRIAL RELATIONS SPECIALIST (TRAIN SALES MANAGER (STORE MANAGER) OFFICE MANAGER (BRANCH MANAGER) ADMINISTRATIVE ASSISTANT PROJECT DIRECTOR LOAN OFFICER PUBLIC RELATIONS SPECIALIST SUPERVISOR HOSPITAL ADMINISTRATOR
OTHER PROFESSIONS	PHYSICIAN LAWYER NURSE EDITOR JOURNALIST SOCIAL WORKER PROBATION OFFICER ARCHITECT PSYCHOLOGIST OPTOMETRIST PHARMACIST DESIGNER CONTRACTOR PHOTOGRAPHER RADIO OR TV ANNOUNCER
CLERICAL, TECHNICAL, BLUE COLLAR, ETC.	DRAFTSMAN RADIO TECHNICIAN MEDICAL TECHNICIAN LAB TECHNICIAN BOOKKEEPER SURVEYOR SECRETARY-STENOGRAPHER CLERK COMPUTER PROGRAMER TAB MACHINE OPERATOR RETAIL SELLING STOREKEEPER BANK TELLER PRINTER WELDER FARMHAND WAREHOUSEMAN TRUCK DRIVER MECHANIC